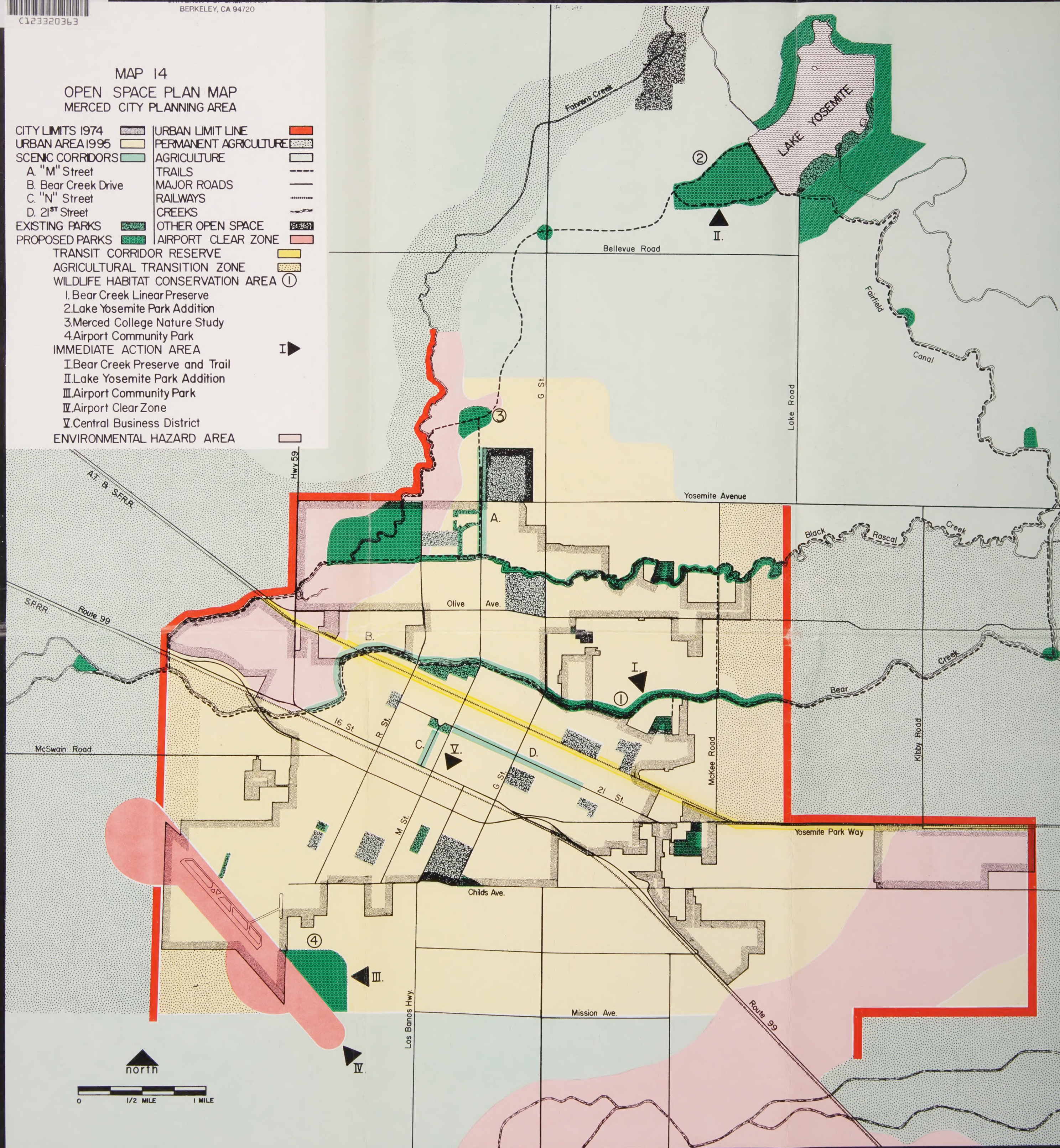


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MAP 14
OPEN SPACE PLAN MAP
MERCED CITY PLANNING AREA

- | | | |
|--------------------------------------|-----------------------|--|
| CITY LIMITS 1974 | URBAN LIMIT LINE | |
| URBAN AREA 1995 | PERMANENT AGRICULTURE | |
| SCENIC CORRIDORS | AGRICULTURE | |
| A. "M" Street | TRAILS | |
| B. Bear Creek Drive | MAJOR ROADS | |
| C. "N" Street | RAILWAYS | |
| D. 21 st Street | CREEKS | |
| EXISTING PARKS | OTHER OPEN SPACE | |
| PROPOSED PARKS | AIRPORT CLEAR ZONE | |
| TRANSIT CORRIDOR RESERVE | | |
| AGRICULTURAL TRANSITION ZONE | | |
| WILDLIFE HABITAT CONSERVATION AREA ① | | |
| I. Bear Creek Linear Preserve | | |
| II. Lake Yosemite Park Addition | | |
| III. Merced College Nature Study | | |
| IV. Airport Community Park | | |
| IMMEDIATE ACTION AREA | | |
| I. Bear Creek Preserve and Trail | | |
| II. Lake Yosemite Park Addition | | |
| III. Airport Community Park | | |
| IV. Airport Clear Zone | | |
| V. Central Business District | | |
| ENVIRONMENTAL HAZARD AREA | | |



ENVIRONMENTAL RESOURCES MANAGEMENT PLAN—SUMMARY

A PORTION OF THE MERCED GENERAL PLAN

January, 1976

Recommended by the Merced City Planning Commission,
August 6, and December 3 and 17, 1975

Adopted by the Merced City Council,
August 18 and September 2, 1975 and January 19, 1976

Prepared by the Merced City Planning Department

Unlike most human enterprises, the conservation movement has an ultimate goal of self-elimination. Conservation will be a success when the word no longer need be used, when the activities that it comprises become an accepted and normal part of human behavior toward the environment . . .

Raymond Dasmann, Conservationist

Introduction

The City of Merced is one of a chain of San Joaquin Valley Cities along U.S. Highway 99 which is one of the main north-south arteries of California. Bakersfield, at the southern limit of the Valley, is 165 miles south of Merced; Sacramento is approximately 110 miles to the north. Merced is the county seat of Merced County, as well as the trading center for a wide rural hinterland. The City of Atwater and Castle Air Force Base are nearby.

The almost level San Joaquin Valley is drained by the slow-moving San Joaquin River into the San Francisco Bay. The foothills of the Sierra Nevada begin to rise gradually a few miles east of Merced. Most of the lower Valley is covered with rich alluvial soil, much of which is under irrigation and planted in orchards or crops, including irrigated pasture. The unirrigated foothills are used mainly to graze beef cattle.

The Merced Planning Area, consisting of the City of Merced and approximately 60 square miles of unincorporated area, has a population of about 43,000. With Castle Air Force Base and the City of Atwater, total population in the Merced/Atwater area is about 67,000.

The Environmental Resources Management Plan (ERMP) is a statement of environmental policy for the City of Merced. The ERMP consists of six (6) state-mandated elements of the General Plan, in the form of five (5) complimentary reports, aimed at creating a single functional plan. The five (5) reports are the Conservation, Scenic Highways, Noise, and Open Space Elements, and a combined Seismic Safety/Safety Element. By making these elements complementary, the ERMP aims at accomplishing an integrated approach to planning for the management of our land, air, water, biological, and cultural resources.

Whenever applicable, elements of the ERMP were prepared with consideration of the local, national, and worldwide problems which are associated with the environment. The scope of the summary, however, has been narrowed down to identify environmental opportunities and problems presented in the plan that relate specifically to the City of Merced.

The ERMP and Open Space Plan Map serve to update the current General Plan and Land Use Plan which were adopted by the City in 1968.

Conservation Element

The Conservation Element is presented first since the resource inventories contained therein are often a prerequisite to the development of the other five elements. The Conservation Element deals with specific resource areas: Climate, Hydrology, Geology, Minerals, Soils, Wildlife and Fisheries, and Historical-Cultural resources.

CLIMATE—

The climate of Merced is one of the most important environmental factors considered. For example, abundant sunshine and a long growing season have helped make the area one of the best agricultural regions in California. Also this abundant sunshine gives Merced an excellent opportunity for the utilization of solar energy as expanding solar technology makes energy from sunlight a marketable resource. Other factors such as generally light winds, dry summers, wet and foggy winters, mild temperatures and climatic/topographic relationships are also considered.

Perhaps the greatest problem related to these climatic factors is air quality. Inversion layers, which periodically hang over the valley, combine with the other factors such as light winds and abundant sunshine to produce photochemical smog. Although smog is presently not a severe problem in Merced, air pollution is bound to intensify as automobiles and urbanization increase. The ERMP discusses this problem in some detail.

HYDROLOGY—

Merced has an excellent supply of water which is drawn from a huge underground storage basin that underlies most of the San Joaquin Valley. Fortunately for Merced, the problems of water management have had special attention in the past. However, the outlook for the future is questionable if present trends continue. Water usage in Merced has risen from an average of 253 gallons per person per day in 1952 to 374 gallons per person per day in 1972. Although there is no evidence Merced will experience a water shortage in the near future, supplies should not be thought of as inexhaustible. This point can be stressed by observing the problems Fresno and other areas are currently experiencing with water supplies. Underground sources are being jeopardized by over-extraction for irrigation and other uses. Even though the aquifers in the Fresno Area replenish themselves over a period of time, the rate of extraction is far greater than the rate of recharge.

Another potential hazard to Merced's water supply is contamination. Seepage from septic tanks and other sources can enter underground municipal and private water supplies and make water unusable.

Since Merced's water supply primarily comes from under the ground, another factor to contend with is the amount of energy needed to pump the water out of the ground. As energy needs continue to accelerate throughout the State, power needed to pump water may become more critical than the water itself.

A major problem associated with the management and conservation of water is flooding. The streams located within the Planning Area have a long history of flooding, and on the basis of hydrologic data compiled by the United States Army Corps of Engineers and other governmental agencies, it is reasonable to expect some future floods to be larger than any recorded in the past.

There are basically two approaches to flood control. One approach is to make the man-made improvements such as dams and levees that will protect areas subject to flooding. Currently the City is evaluating such efforts by the Merced County Streams Group Project, a Corps of Engineers' undertaking.

The other approach is to regulate the kinds of development allowed in floodprone areas. If floodplain areas are restricted to uses such as parks, golf courses, recreation areas, wildlife preserves, and agriculture uses, projects such as the Merced County Streams Group Project may either not be necessary or may be reduced in scale. The ERMP discusses both approaches to flood control.

GEOLOGY—

The geology portion of the Conservation Element deals mostly with problems of solid waste disposal. The Seismic Safety/Safety Element delves more deeply into the major seismic and geologic conditions in Merced.

Solid waste is a problem. Our advanced technology and wastefulness have combined to increase the average production of solid wastes in Merced to approximately 240,000 pounds a day. A traditional means of solid waste disposal in some areas has been to dump it in inconspicuous places such as the ocean. Burning has also been done for many years in the Merced Area. These practices are now proving to be quite damaging. At present, the sanitary landfill seems to be the best surface disposal procedure and Merced is currently participating with Merced County and other cities in utilizing a geologically safe and sanitary landfill site on Highway 59.

The ultimate solution to solid waste disposal, however, is to change the "super-consumer, superwaster" pattern which is so prevalent in Western Society. Recycling efforts in Merced have been somewhat limited, but the potential for such efforts is very great, especially as resources become more and more costly.

MINERALS—

Specific mineral deposits in the Merced area are scarce. Nevertheless, policies relating to the conservation of minerals should be given high priority in local government. Sources of electricity and fuel should be given first priority when stressing the need for mineral conservation.

The cumulative effect of "conveniences" and "necessities" used in the home and office is causing an excessive strain on many of our natural mineral resources. The excessive overuse of energy and resources must come to some sort of compromise with the environment's ability to provide these resources.

SOILS—

In the ERMP soils are correlated and mapped with respect to the following Critical Environmental Factors: 1) Agricultural Land, 2) Corrosivity, 3) Septic Tank Filter Field Limitations, 4) Soil Bearing Capacity, Slope, and Erodibility.

The Merced Area is endowed with an abundance of rich soils. The presence of high value orchards and croplands surrounding the City of Merced is a vivid illustration of the importance of agriculture in the local economy. Unlike many natural resources, however, agricultural land is of finite quality. It can be thought of as a nonrenewable natural resource. Once converted to other uses, the likelihood of it ever again being used for agriculture diminishes. There are a number of factors that have caused prime agricultural land to be lost in order to provide space for people. For example, high taxes imposed on farmland can force even the most persistent farmers out of business. The ERMP refers to several ways including the Williamson Act which may help to preserve these very important agricultural soils. Further, it is stressed that agricultural land should be preserved whenever possible.

The failure of steel pipe due to corrosion is of concern to the Merced area because of the rather high amount of corrosive material in the various soil types in and around the City. Corrosion of steel pipes can be avoided by the use of plastics, wrapped pipe, or other special devices.

Another problem related to soils in Merced is the severe septic tank filter field limitation found in considerable areas north and south of the city. To alleviate the possibility of filter fields failing in the severe areas, special measures have and should be taken. The Merced County Health Department currently regulates and monitors septic tank filter field problems.

The ERMP also considers soil bearing capacity, slope, and erodibility. Soil bearing capacity concerns the ability of soils to withstand pressure on them by foundations. The Plan has information on parks of the Planning Area where there are severe problems in soil bearing capacity, including areas of excessive slope. This factor is not critical except in the Lake Yosemite Area and in some areas along the creeks. Erosion can be a critical factor in almost any area if proper care is not taken. However, areas that are most susceptible to erosion in Merced are limited to land along the creeks, some portions of the Lake Yosemite Area, and some areas west of the City.

WILDLIFE AND FISHERIES—

Wildlife has a definite place in the urban environment. The opportunity to plan communities that enhance urban habitat species of wildlife is a new and challenging field and should be met with new and innovative ideas. The ERMP identifies the six general classes of wildlife habitats found within the Merced City Planning Area, and recommends that by incorporating all types of habitats and knowing the potentials of each, definite steps could be taken to bring nature back to the City. At the local level destruction of wildlife habitats and the degradation of water quality (and likewise fish habitats) should be avoided.

HISTORICAL AND CULTURAL—

Although the Conservation Element is oriented toward the natural environment, certain man-made features are becoming critically important from a historic and cultural point of view. There are many historic events that have played a role in the City of Merced's development. These events can best be seen and viewed through the preservation of buildings and sites that once made history.

The ERMP presents a preliminary survey with the purpose of identifying physical resources which may, after more intensive analysis, prove to be of historic and/or cultural importance to the community. It is recommended that a plan for Historic Conservation be made, and a Historic Conservation Committee be established which would develop a Comprehensive Inventory of historic structures.

Scenic Highways Element

The Scenic Highways Element, as delineated by State Law, is intended to provide a plan and program for the identification and protection of scenic corridors along elements of the State and County Scenic Highways System. The ERMP approaches this element in terms of urban "scenic corridors." While there are no scenic highways per se within the Planning Area, there are some outstanding scenic corridors, such as Bear Creek Drive, which pass through areas containing natural and/or cultural features.

To promote the establishment of a basic scenic corridor system in Merced, criteria for identifying local corridors has been developed and presented in the ERMP. Using the criteria, several scenic corridors are considered and the most appropriate and most scenic drives are shown on the Open Space Plan Map.

Scenic corridors also have a potential for multiple uses. As the direct and indirect costs of automobile travel increase, bicycle and pedestrian travel will undoubtedly take a greater role in transportation. Bicycle paths and foot paths, which are physically separate from automobile traffic, are very possible and desirable on some of these corridors. In the forthcoming specific corridor plans (as delineated in the ERMP) much emphasis will be placed on multiple use by many modes of travel.

Seismic Safety Safety Element

The purpose of the Seismic Safety/Safety Element is to encourage the development of improved land use and circulation standards and policies that recognize the dangers of fire, geologic, and other hazards, including identification and appraisal of seismic hazards such as susceptibility to service ruptures from faulting, groundshaking and ground failures.

Contained in this Element is a discussion of risk, including information on factors that may affect a person's perception of a risk. Should a risk be taken, or does a person feel the prospective costs of safety are a worthwhile investment?

The State of California has a long history of seismic activity; while there is no record of any seismic activity ever originating within the Planning Area, Merced has been shaken by earthquakes originating elsewhere, including recent Cathey's Valley activity. This element details past seismic activities and describes the potential geologic hazard associated with earthquakes. The City has recently adopted the 1973 Uniform Building Code which places the Planning Area within Seismic Risk Zone III (Severe Damage Intensity VIII).

The Element also discusses the variety of different land uses and construction types within the City which present a varying potential for fire hazards, a short description of the fire insurance rating system which gives the City of Merced a very high fire insurance rating, and a number of prospective fire and disaster hazards and potential ways to avoid these problems.

Noise Element

The fourth basic component of the ERMP is the Noise Element Report. This Element, mandated by State law, shows the contours of present noise levels associated with major transportation corridors in and over the City: State highways (as well as portions of "G" Street and Olive Avenue), the railroad lines transversing the City, and Noise Exposure Forecast contours reflecting the latest U.S. Air Force Report on noise from Castle Air Force Base airplanes flying over Merced.

Noise pollution is a very real problem in the Merced Planning Area. A good portion of the City is located directly in the flight patterns of Castle Air Force Base. With the September, 1974, release of a new Castle Air Force Base Noise Map, a number of prospective sites for new residential housing in Merced may ultimately be ineligible for Federal Housing Authority (FHA) and Veteran's Administration (VA) loans. The 1974 Noise Map remains under continuing study and evaluation by the U.S. Department of Housing & Urban Development (HUD) and other federal, state, and local officials at the time of preparation and release of the Noise Element in early 1976; further adjustments to the present noise situation may be expected.

Nevertheless, aircraft noise is not the only form of noise pollution in the Merced Area, as reflected by the noise contours of major automobile and railroad corridors, as well as problems from everyday household appliances, as reflected in charts that show noise impacts of sources such as gas lawn mowers and dishwashers. The Noise Element can also be expected to be a basic source of information in the event future consideration is given by the City to implementation of a noise ordinance.

Open Space Element

The Open Space Element is the final and most important Element of the ERMP because it incorporates the findings and recommendations of the other ERMP Elements and contains the measures necessary to implement the major proposals of the Plan.

The purpose of the Open Space Element is to effectuate methods and alternatives for the long-range preservation and conservation of open space, including agricultural land, natural resources land, wildlife habitats, recreational land, and scenic land.

In Merced, as in most urbanized areas in the United States, there has been a general lack of concern for the preservation of open space in the past. If Merced is to retain its many amenities and prime agricultural land, attitudes must drastically change. A recent statement by the Citizens General Plan Advisory Committee recommends that it be "mandatory that lands currently zoned as agriculture remain so in the immediate perimeter of Merced City limits."

The Open Space Plan Map as presented here is a graphic description of the type of physical environment the goals and policies of the ERMP are capable of creating. Shown on the Open Space Map are Scenic Corridors, proposed parks and other open spaces, urban limit lines, permanent agricultural areas, agricultural transition zones, a transit corridor, scenic trails, wildlife habitat conservation areas, and environmental hazard areas. More detailed explanation of each of these segments of the Map is included in the Plan.

This map will be the foundation for updating the existing land use map and General Plan (1968) of the City of Merced. Together, the 1968 General Plan and the ERMP now represents the City's best thinking in conserving the natural resources of this community while enabling the continued economic, social and cultural growth of Merced.

(For Goals and Policies as presented in the ERMP see reverse side)